

CLAIMS

1. A method of protecting plants from insects comprising:
 applying a formulation comprising partially-desiccated entomopathogenic nematodes and a carrier to plant surfaces growing above the surface of the ground, said formulation having an Aw of
 5 from about 0.98 to about 0.94, said carrier comprising water and a substance which maintains the Aw of the formulation at levels between about 0.98 and about 0.94 when exposed to air at 70% relative humidity and 25°C for 24 hours.
2. The method of claim 1 wherein said carrier comprises a water-retentive polymer.
3. The method of claim 2 wherein said water-retentive polymer is a gel forming polymer.
4. The method of claim 1 wherein said carrier comprises a humectant.
5. The method of claim 4 wherein said humectant is glycerol, polyethylene glycol, soluble collagen, or sorbital.
6. The method of claim 1 wherein said carrier comprises a water-retentive polymer and a humectant.
7. The method of claim 1 wherein said formulation comprises a water-retentive polymer and a UV protectant.
8. The method of claim 1 wherein said formulation comprises a humectant and an UV protectant.
9. The method of claim 1 wherein said formulation comprises a water-retentive polymer, a humectant and an UV protectant.
10. The method of claim 1 wherein the entomopathogenic nematode is a member of the family Steinernematidae or the family Heterorhabditidae.

11. The method of claim 1 wherein the entomopathogenic nematodes are symbiotically associated with bacteria in the family Enterobacteriaceae.

12. The method of claim 1 wherein the partially-desiccated entomopathogenic nematodes have enhanced survival after application to soil or plants as compared to entomopathogenic nematodes that have not been desiccated.

13. The method of claim 1 wherein the partially-desiccated entomopathogenic nematodes are third-stage infective juveniles.

14. The method of claim 1 wherein the partially-desiccated nematodes have a water activity of about 0.98 to about 0.94.

15. The method of claim 1 wherein the entomopathogenic nematodes have been partially desiccated by placing said nematodes in environments of progressively-decreasing relative humidity or aqueous solutions of progressively-increasing concentrations of glycerol.

16. The method of claim 1 wherein the formulation is applied to foliage of the plant.

17. The method of claim 1 wherein the formulation is applied by spraying.

18. A formulation for protecting plants from insects, comprising

- a) partially-desiccated entomopathogenic nematodes, and
- b) a carrier, said carrier comprising water and a substance for maintaining the A_w of the formulation at levels between about 0.98 and 0.94 when exposed to air at 70% relative humidity and 25°C for 24 hours;

wherein said formulation is a liquid or gel and has an A_w less than 0.99.

19. The formulation of claim 18 wherein said substance is a water-retentive polymer, a humectant, or a combination of a water-retentive polymer and a humectant.

20. The formulation of claim 18 further comprising an UV protectant.

21. A formulation for protecting plants from insects, comprising

5 a) partially-desiccated entomopathogenic nematodes having an Aw of between 0.950 and 0.980, and

b) a carrier, said carrier comprising water and a substance for maintaining the Aw of the formulation at levels between about 0.980 and 0.940 when exposed to air at 70% relative humidity and 25°C for 24 hours, wherein said substance is a humectant or a water-retentive polymer or both;

10 and

wherein said formulation is a liquid or gel and has an Aw of from about 0.980 to about 0.940.